

The Improvement of the Nuclear Laboratory Curriculum Program at Florida Memorial University

Executive Summary

Florida Memorial University has established a Radiochemistry program that has been a success on our campus. Recently, a Radiobiology program has been designed, which aims to benefit from the high number of students listing Biology as their major. We propose to improve the nuclear laboratory curriculum on our campus by incorporating a number of specific radiochemistry and radiobiology laboratory exercises in several courses. For example, the selenium extraction process in different pH conditions in aqueous vs. organic phases will be explored with the help of radioactively labeled selenium (^{75}Se). In addition, several biology experiments will be modified for the incorporation of radioactive labels, e.g., labeling of PCR fragments with ^{32}P . Of great help in achieving our goals will be our collaboration with the Nuclear Education Teaching Laboratory (NETL) at the University of Texas in Austin. Several of these experiments will be tried at NETL during the summer and fall of 2010 and will be incorporated into our curriculum during fall 2010 and spring 2011, respectively.

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